

L 19670-65

ACCESSION NR: AP4045667

3

of the disadvantage factors lie within the range of theoretical values obtained by different methods. Orig. art. has: 3 figures and 6 tables.

ASSOCIATION: Institute of Atomic Energy, Kjeller, Norway; Institute of Nuclear Research, Swierk, Poland; Boris Kidrich Institute of Nuclear Sciences, Vincha, Yugoslavia

SUBMITTED: 00

ENCL: 04

SUB CODE: NP

NO REF SOV: 002

OTHER: 020

Card 3/7

L 43573-65 EPP(c)/EFT(n)-2/EPR/EWT(m)/EWG(m) Pr-4/PS-4/Pu-4

ACCESSION NR: AP5012918

PO/0046/64/009/010/0765/0769

AUTHOR: Bednarz, Roman J. (Bednazy, R. Ya.); Mika, Janusz R. (Mika, Ya. R.)

31  
30  
B

TITLE: Thermal utilization factor of the "NORA" reactor cell

SOURCE: Nukleonika, v. 9, no. 10, 1964, 765-769

TOPIC TAGS: reactor moderator, nuclear reactor, nuclear reactor technology

ABSTRACT: The article presents a method for calculating the thermal utilization factor of a reactor cell. It is based on the AMOYAL-BENOIST one-velocity diffusion theory assumed to be valid in the heavy water moderator. The cell geometry and nuclear parameters are established first for the NORA reactor and the disadvantage factors for the fuel and the cladding are calculated next. Finally, the disadvantage factor for the moderator is calculated. It can be seen, that the neutron flux distribution in the moderator has relatively little effect on the thermal utilization factor; most absorption occurs in the fuel and in the cladding.

Orig. art. has: 2 tables, and 22 formulas.  
Card 1/2 *Submitted 10 Mar 64*

MIKA, Janusz, dr

Summer school for reactor physics. Problemy 2. 1964-  
700 '64.

L 58508-65 EPF(c)/EWP(z)/EWP(b)/T/EWA(d)/EWP(t) Pr-4 DJ/JD  
 ACCESSION NR: AF5019553 CZ/0032/64/014/010/0767/0771

AUTHOR: Mika, J. (Engineer); Ondracek, E. (Engineer)

TITLE: Effect of friction on compression tests of cast iron samples

SOURCE: Strojirenstvi, v. 14, no. 10, 1964, 767-771

TOPIC TAGS: metal surface, metal strength, metal friction, pig iron, metal test, metal fracture

Abstract [Authors' English summary, modified]: It is pointed out that friction between contact surfaces is an important factor partly determining the behavior of cast-iron samples during compression tests. Destruction of samples is caused by the shearing failure. Simple compression results in a brittle fracture. Figures obtained for strength under simple compression are consistently lower than results of conventional tests. The authors explain how the undesirable influence of friction may be eliminated. Orig. art. has: 11 figures, 2 tables, 2 graphs.

Card 1/2

L 58508-65  
ACCESSION NR: AP5019553

2

ASSOCIATION: Mika - Vyzkumne stredisko Zdarakych strojiren, Zdar n. Saz  
(Research Center of the Zdar Engineering Plants); Vyzkumny ustav tvarecich stroju,  
Brno (Research Institute for Welding Machines)

SUBMITTED: 00

ENCL: 00

SUB CODE: MM

NR REF SOV: 002

OTHER: 003

JPRS

*lyp*  
Card 2/2

SVOBODOVA, Hana, inz.; MIKA, Jiri, inz.

Calculation of the railroad line loading by the Soviet Ural 2 computer.  
Zel dop tech ll no.2:32-33 '63.

MIKA, Jiri, inz.

Use of mechanisms for loading operations. Zol.dop tech 12 no.1:19-20  
'64.

PETER, László; MIKA, József

Remarks about the application of the mechanically controlled  
spark exciter with intermediate voltage. Magyar folyóirat  
65 no. 12:486-489 '59.

1. Nehézipari Műszaki Egyetem Kohászati Kémiai Tanszék, Miskolc.



MIKA, Jozsef, dr.

Remarks about the isolation and chemical analysis of the oxidic inclusions of steels. Koh lap 93 no.6:250-255 Je '60.

MIKA, Jozsef, dr.

Remarks about the isolation and chemical analysis of the oxidic inclusions of steels. Koh lap 93 no.7:310-314 JI '60.

MIKA, Jozsef; SZOPORY, Bela

"Multiplication" process of the photoelectric end-point  
ultramicrotitrations.I. (To be contd). Magyar folyoir  
67 no.3:129-137 Mr '61.

1. Miskolci "Eszaki Miskolci Egyetem Kemiai Tanszeke.

MIKA, Jozsef, dr.

"Physical chemistry for metallurgists" by Aurel Horvath. Reviewed  
by Dr.Jozsef Mika. Muszaki kozl MTA 30 no.1/4:457 '62.

L 31245-66

ACC NR: ATB02.845

SOURCE CODE: CZ/0032/66/016/002/0127/0130

AUTHOR: Mika, J. (Engineer)

ORG: Research Center, Zdar Machine Works and Foundry, n.p., Zdar n. Saz (Vyzkumne strelisko Zdarových strojiren a slevaren, n.p.)

TITLE: Strain gage pickups used at the ZDAS Works

SUMMARY: Strojireni, v. 16, no. 2, 1966, 127-130

TOPIC TAGS: strain gage, nonferrous metal alloy, weighing scale

ABSTRACT: The article deals with the design and features of strain gage pickups employed for the measurement of forces and in some elements of weighing machines. The article emphasizes the advantages resulting from the incorporation into the system of a deforming link made of TiAlSi alloy. This paper was presented by Engineer L. Klaboch. Orig. art. has: 7 figures and 2 tables. [Based on author's Eng. abst.] [JPRS]

SUB CODE: 14, 20, 13, 11 / SUBM DATE: none / ORIG REF: 003 / OTH REF: 001

Card 1/1 *BLG*

UDC: 621.317.39:620.172

*0975*

*0830*

MIKA, Kalman

An account of the 4th Czechoslovak Conference on "Wood Economy  
in the Construction Industry", held in Zvolen, October 17-19,  
1961. Faipar 12 no. 5:157-160 My '62

MIKA, M.

A conference on insemination organized by the Ministry of Agriculture, July 5, 1953,  
p. 420. (MEDYCINA WETERYNARYJNA. Vol. 9, no. 9, Sept. 1953)

SO: Monthly List of East European Accessions, L.C., Vol. 3, No. 4, April, 1954

MIKA, Zdenek, inz. 68c.

Technical problems of large area spray irrigation. Vodni  
hosp 14 no.12:463 '84.



Country : Czechoslovakia E-3  
Category : Analytical Chemistry. Analysis of Organic  
Substances.  
Abs. Jour. : Ref. Zhur.-Khimiya No. 6, 1958 19194  
Author : Novak, K.; Mika, V.  
Institut. :  
Title : Photometric Determination of Tetrahydronaphthalene  
naphthalene Hydroperoxide.  
Orig Pub. : Chem. listy, 1958, 52, No 4, 751-752

Abstract : Description of the preparation of the leuco-compound of methylene blue (I) and of its use in photometric determination of the hydroperoxide of tetrahydronaphthalene (II) in tetrahydronaphthalene purified with oxygen. Into a solution of 200 mg I in 150 ml water containing 5 drops of 0.1% aqueous solution of  $\text{PdCl}_2$ , mixed with 150 ml  $\text{C}_6\text{H}_6$  and placed in a special washing bottle,  $\text{H}_2$  is passed until decolorization is effected (15-20 minutes). The colorless leuco-compound passes into the benzene layer which is forced by hydrogen pressure into a burette connected to the washing bottle. To 1 ml of this solution are added 10 ml 0.2% solution of trichloroacetic acid (III) in  $\text{C}_6\text{H}_6$ , and the  
Card: 1/2

CZECHOSLOVAKIA/Chemical Technology. Chemical  
Products and Their Applications.  
Chemical Engineering.

H-2

Abs Jour : Ref Zhur-Khimiya, No 7, 1959, 23645

Author : Mika, V.

Inst : -

Title : Absorption of Carbon Dioxide by Water in a  
Disk Column.

Orig Pub : Chem. listy, 1958, 52, No 5, 864-868

Abstract : Dependence of the absorption rate on gas  
velocity, flow rate and temperature of  
the absorbent and degree of packing wet-  
ting was investigated. It was found that  
gas velocity has only a slight effect on  
the above; the effect of absorbent flow

Card : 1/2

H-6

MIKA, V.

The application of the Higbie mode to physical absorption in a disk column. In English. Coll.Cs.Chem. 24 no.9:2843-2849 S '59.

(EEAI 9:5)

1. Department of Chemical Engineering, Institute of Chemical Technology, Prague.

(Absorption)

(Liquids)

MIKA, V.; MRACEK, J.

Ingot mould casting in Ceskoslovenske zavody naftovych motoru  
[Czechoslovak Oil Engine Factory] in Horovice. Slevarenství 10  
no.4 142-144 Ap '62.

1. Ceskoslovenske zavody naftovych motoru, Horovice.

W.A.A., 76

Examination of records of the FBI, Department of Justice, and other active agencies has disclosed that the following persons were active in the Los Angeles area during the period 1942-1945:

Department of Chemistry, University of Colorado,  
Chemical Engineering Center,

MIKA, V.; NOVAK, K.

Determination of acid quantity obtained in ethyl chloride. - chem  
prum 14 no. 2:4-11:482 1968.

1. Research Institute of Organic Chemistry, Bratislava.

MIKA, A.

Inventiveness as a means to improved industrial safety and hygiene. p. 111.  
MIPIK, Katowice, Vol. 3, no. 4, Apr. 1991.

10: Monthly List of East European Accessions, (1991, 10, Vol. 4, no. 1, Oct. 1991,  
Incl.

MIKA, Z.; KONICEK, B.

"How to achieve a higher yield from meadows." P. 148

VESTNIK. Praha, Czechoslovakia; Vol. 6, No. 3, 1959

Monthly list of East European Accession Index (EEIA), Library of Congress,  
Vol. 8, No. 7, July, 1959

Unclas





MIKA Z.

Zarys ekonomiki kolejowych przewozów towarowych (Outline of economics of railway goods' transports) by Z. Mika. Reported in New Books (Nowe Książki.) February 15, 1956. No. 4.

MIKA, Z., BUDZIKOWSKI, W.

Automotive transportation in the German Democratic Republic cooperates with railroads. Pt. 2, p. 279

MOTORYZACJA Warszawa, Poland Vol. 14, no. 11, Nov. 1959

Monthly List of East European Accessions, (EEAI) LC, Vol. 9, no. 2  
Feb. 1959  
Uncl.

Miss A. M. M. M.

Continued on p. 15  
Volume 15 p. 15

ABELISHVILI, L.G.; GABASHVILI, N.V.; KAKABADZE, D.R.; KARUMIDZE, I.G.;  
KOTIYA, A.K.; KURDIANI, I.S.; LOGUA, Sh.S.; MACHAVARIANI, I.V.;  
MESKHI, N.S.; MIKABERIDZE, A.S.; SEKHNIASHVILI, G.M.; TOIDZE, M.Z.;  
TOPCHISHVILI, A.A.; KHEVSURIANI, M.A.

In memory of Stepan Petrovich Kirkesali, 1890-1937. Elektrichestvo  
no.5:90-91 My '65. (MIRA 18:6)

MIKABERIDZE, G.V.

The English secondary school. Politekh. obuch. no.9:85-89 3 '57.  
(Great Britain--Education, Secondary) (MLBA 10:9)

L 32684-66 EWT(m)/EWP(v)/T/EWP(t)/ETI/EWP(k) JD/HM

ACC NR: AP 6012286

(N)

SOURCE CODE: UR/0125/65/000/011/0077/0078

AUTHOR: Yakobashvili, S. B.; Mikaberidze, R. G.; Tariyelashvili, M. G.; Gzirishvili, T. V.

ORG: none

TITLE: Surface tension of AN-291 and AN-292 fluxes

SOURCE: Avtomaticheskaya svarka, no 11, 1965, pp 77-78

TOPIC TAGS: electroslog melting flux, surface tension, fluorine, metal melting/  
/AN-291 electroslog melting flux, AN-292 electroslog melting flux

ABSTRACT: Surface effects at the metal-slag and metal-gas interfaces are of major significance to the course of the electroslog melting of metals underneath synthetic slags. Hence it is important to know the parameters of these effects and their dependence on the chemical composition of the metal and slag, as well as on the ambient medium. Until recently  $\text{CaF}_2$  has been a principal component of the fluxes used in welding and electroslog melting. Now, however, that the Ye. O. Paton Institute of Electric Welding has developed fluorine-free fluxes (based on  $\text{CaO-Al}_2\text{O}_3\text{-MgO}$ ), it was of interest to compare surface tension for these fluxes with surface tension for fluorine-containing fluxes (based on  $\text{CaF}_2\text{-Al}_2\text{O}_3\text{-CaO-Mg-O}$ ).

Card 1/2

UDC: 621.791.04

L 32684-66

ACC NR: AP6012286

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Accordingly, surface tension of the F-containing AN-291 flux was compared with that of the F-free AN-292 flux by determining the maximum pressure in the gas bubble (for description of the test method, cf. S. B. Yakobashvili et al. Avtomaticheskaya svarka, no 8, 1965) with the aid of corundum capillaries of 4.5 mm diameter which were plunged into the melt to a depth of 5 mm. Surface tension  $\sigma$  was determined from the formula

$$\sigma = \frac{rg}{2} P \left( 1 - \frac{2}{3} \cdot \frac{rg}{P} - \frac{1}{6} \cdot \frac{r^2 g^2}{P^2} \right),$$

where  $r$  is the inside radius of the capillary, cm;  $g$  is the acceleration due to gravity, cm/sec<sup>2</sup>;  $P$  is the maximum pressure in the bubble, cm H<sub>2</sub>O; and  $\sigma$  is the density of slag at a given temperature, g/cm<sup>3</sup>. On this basis it is found that the surface tension of the flux AN-291 is lower (430 dynes/cm) than that of the fluorine-free flux AN-292 (610 dynes/cm). The reason for this difference is that the presence of CaF<sub>2</sub> in the flux AN-291 causes the appearance of weak F<sup>-</sup> ions which weaken the bond between the surface ions and the bulk of the melt and thus reduce surface tension. Orig. art. has: 1 table.

SUB CODE: 11, 13 SUBM DATE: none/ ORIG REF: 002

Card 2/2 BLG



MIKAC, M.

"Use of a wooden last in the production of rubber footwear."

p. 126 (Kozarstvi) Vol. 6, no. 7, July 1956  
Prague, Czechoslovakia

SO: Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no.4,  
April 1958

MIKAS, A.

The reproduction of patterns. p. 117. In: Zborník, vol. 7, no. 3, 1951.  
(Praha, Czechoslovakia)

51: Monthly List of East European Accessions. 1951-52, vol. 6, no. 12, Dec 1952. -no. 1.

MIKAC-DEVIC, Dusanka; WEBER, Karlo

On the formation of haemoglobin (methaemoglobin) by blood drying  
I. Spectrophotometric method. Glas Hem dr 25/26 no.3/4:197-205  
'60/'61

1. Medicinski fakultet, Zagreb.

x

YUGOSLAVIA

Dusanka MIKAC - DEVIC and K. WEBER, Medical Faculty, University  
(Medicinski fakultet Sveucilista,) Zagreb.

"Spectrophotometric Determination of Turbidity for the Thymol Test"

Zagreb, Arhiv za higijenu rada i toksikologiju, Vol 13, No 3, 1962;  
pp 171-181.

Abstract [German summary modified] : Discussion of general principles  
of photometry of colloid suspensions, stressing the difference between  
absorbed and scattered-diffuse radiation leading to importance of the  
distance between receptor-recorder of device and liquid being measured.  
Six photometers were measured with varied distances and lights as used  
for thymol turbidity test. Transmitted light is better criterion than  
scattered light but standardization of other factors is essential. Table,  
7 diagrams; 5 Western and 1 Yugoslav reference.

MITKAC-DEVIC, Ivanka

Formation of hemoglobin during the process of drying of the blood. II. Kinetics of the reaction. Arch. Hig. rada. 14.192 '63.

1. Medicinski fakultet, Bolnica dr. M. Stojanovic, Beograd.

YUGOSLAVIA

Dusanka MIKAC-DEVIC, Medicinal Biochemistry Section of the Pharmaceutical Society of Croatia (Sekcija za medicinsku biokemiju Farmaceutskog društva Hrvatske,) Zagreb.

"Organization of Laboratory Tasks."

Belgrade, Narodno Zdravlje, Vol 19, No 5, 1963; pp 168-170.

Abstract: The time when the most prominent inadequacy in medical lab work in Yugoslavia was simply staff shortage is now essentially over - table shows how in the chemical laboratory of the Stojanovic hospital in Zagreb total annual number and number of kinds of tests done grew from around 10M, 40 in 1947 to 80M, 90 in 1961; but proper organization and hence optimal utilization of skilled staff and expensive facilities and apparatus is conspicuously lacking. The four basic types of medical laboratories classified according to complexity of tasks are described in detail, as defined at a meeting in Rijeka in 1960.

1/1

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NAJMAN, Emil, dr.; REINER-BANOVAC, Zeljka, dr.; MIKAC-DEVIC, Dusanka, dr.

Transaminases and aldolase in the diagnosis of diseases of childhood. Liječn. vjesn. 85 no.10:1095-1104 '63.

1. Iz Dječjeg odjela i Biokemijskog laboratorija Opće bolnice  
"Dra Mladena Stojanovica" u Zagrebu.

MIKAC-DEVIC, D.

Hemoglobin obtained through blood drying. Bul se Young 8  
no.3/4:91-92 Je-Ag'63.

1. Interni odjel Medicinskog fakulteta, Zagreb.

\*



MIKAC-DEVIC, Dusanka

Hemoglobin formation in the drying of blood. III. Effect of various factors on the velocity of hemoglobin formation.  
Arh. hig. rada 15 no.3:249-262 '64.

1. Bolnica Dra M. Stojanovica, Medicinski fakultet  
Sveučilišta u Zagrebu.

MIKIC-JEVIC, Juganka

Microcuvettes in spectrophotometry. Farmaceut gi Zagreb 20  
no.5:174-180 My '64.

YUGOSLAVIA

KRMPOTIC, Jelena; SUNARIC, Rade; NEMANIC, Djordje; and MIKAC-DEVIC, Dusanka, Clinic for Otorhinolaryngology of the General Hospital "Dr. M. Stojanovich" and Department of Anatomy, Medical Faculty of University (Otorinolaringoloska klinika Medicinskog; fakulteta u Bolnici "Dr. M. Stojanovic" i Anatomski Institut Medicinskog fakulteta) Zagreb

'Transtemporal Extradural Section of the Large Superficial Petrosal Nerve in Headaches and Ozena'

Radovi Medicinskog Fakulteta u Zagrebu, Vol 13, No. 3; 1965, pp 215-220

Abstract [English summary modified]: Report on 53 resections of the superficial larger petrosal nerve for headache, including that done in 15 patients with ozena, over the course of the last 3 years. In 9 of the patients, the resection was bilateral. A study on the anatomy of the temporal bone was done in 150 cadavers, listing the data on the various possible anomalies in the area and the general incidence in the 300 bones. There were no adverse effects from the surgery and in most of the cases the results were exceedingly good, even to the extent of the essentially complete cure of both nostrils when only a unilateral operation was done. 2 photomicrographs, 2 surgical diagrams; 13 Western and 6 Yugoslav and 1 Soviet reference; manuscript received 24 December 1964.

*Mikachich*  
YUGOSLAVIA / Zooparasitology. Acarina and Insect-Vectors of  
Disease Pathogens.

G-3

Abs Jour : Ref Zhur - Biol., No 8, 1958, No 33974

Author : Mikachich

Inst : Not given

Title : Summary of Data on the Study of Ixodous Mites in  
Yugoslavia. -- Svodka dannykh po izucheniyu iksodovykh  
kleshchey v Yugoslavii.

Orig Pub : Glasnik biol. sek. Hrvatsko prirodosl. drustvo, 1953  
(1955)

Abstract : No abstract.

Card 1/1

MIKACIO, D.

"Parasitology, Vet. Fac. U. of Zagreb."

Vet. Archiv. 23 : 87-92, 1953

MIKACIC, Davor

Research concerning the fresh-water snails as carriers of liver-fluke. Ijetopis JAZU 64:337-339 '57 (publ.'60).

MIKACIC, D.

SURNAME (in caps); Given Names

Country: Yugoslavia

Academic Degrees: not given /

Affiliation: not given /

Source: Belgrade, Veterinarski glasnik, No 7, 1961, pp 555-560.

Data: "Parazitology in the World - in the Past and Today."

"APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R001033910014-9

APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R001033910014-9"



BORDJOSKI, M., Dr.; MIKACIC---ANTUNOVIC, Dr.

Analysis of results of agglutination reaction in diagnosis of leptospirosis. Higijena, Beogr. 8 no.2-3:153-162 1956.

1. Institute of Hygiene, Belgrade.

(LEPTOSPIROSIS, diag.

tube-agglut. test (Ser))

(AGGLUTINATION,

tube-agglut. test in diag. of leptospirosis (Ser))

*Handwritten:*  $\alpha, \beta, \gamma, \delta, \epsilon, \zeta, \eta, \theta, \iota, \kappa, \lambda, \mu, \nu, \xi, \omicron, \pi, \rho, \sigma, \tau, \upsilon, \phi, \chi, \psi, \omega$

*Handwritten:*  $\alpha, \beta, \gamma, \delta, \epsilon, \zeta, \eta, \theta, \iota, \kappa, \lambda, \mu, \nu, \xi, \omicron, \pi, \rho, \sigma, \tau, \upsilon, \phi, \chi, \psi, \omega$

*Handwritten:*  $\alpha, \beta, \gamma, \delta, \epsilon, \zeta, \eta, \theta, \iota, \kappa, \lambda, \mu, \nu, \xi, \omicron, \pi, \rho, \sigma, \tau, \upsilon, \phi, \chi, \psi, \omega$

*Handwritten:*  $\beta$

*Handwritten:*  $\alpha$

*Handwritten:*  $\alpha, \beta, \gamma, \delta, \epsilon, \zeta, \eta, \theta, \iota, \kappa, \lambda, \mu, \nu, \xi, \omicron, \pi, \rho, \sigma, \tau, \upsilon, \phi, \chi, \psi, \omega$

KAKUSHADZE, T.I.; MIKADZE, A., dots., red.

[Electron theory of metals] Elektronnaia teoriia metal-  
lov. Tbilisi, Izd-vo Nauchno-metod. kabineta, 1954. 245 p.  
(Free electron theory of metals) (MIRA 16:7)

MIKADZE, A.A.

Separation of a gaseous mixture by an electric discharge. Trudy  
Tbil. gos. ped. inst. 14:41-57 '59. (MIRA 15:8)  
(Electric discharges through gases)

- MIKADZE, G.A.

Petrography of Paleocene volcanic formations in Tetri-Tskaro  
District. Soob.AN Gruz.SSR 24 no.3:303-309 Mr '60.

(MIRA 13:7)

1. Akademiya nauk Gruzinskoy SSR, Geologicheskoy institut, Tbilisi.  
Predstavleno akademikom G.S.Dzotsenidze.  
(Tetri-Tskaro District--Breccia)

11/11/81

rel. pure volcanism in the area of the  
Griz. 1981 no. 2 (1981) 1981

1. 1981 (1981) 1981 (1981) 1981 (1981)  
1981 (1981) 1981 (1981) 1981 (1981)

ZAYONTS, R.M., kand.tekhn.nauk; MIKADZE, G.S., inzh.

Means for improving the quality of acid-resistant ceramic  
products. Khim.i neft. mashinostr. no.8:24-25 Ag '65.  
(MIRA 18:12)

ZALISHVILI, M.M.; MIKADZE, G.V.

Role of actin in muscle tissues and some problems in the theory  
of muscle contraction. Biokhimiia 24 no.4:612-624 J1-Ag '59.  
(MIRA 12:11)

1. Institut fiziologii Akademii nauk Gruzinskoy SSR, Tbilisi.  
(MUSCLE PROTEINS metab)



MIKADZE, G.V.

ATP-ase and cholinesterase activity of myosin and actomyosin of  
the smooth muscle. Soob. AN Gruz. SSR 29 no.5:539-544 II '62.  
(MIRA 1813)  
1. Institut fiziologii AN GruzSSR, Tbilisi. Submitted December  
14, 1961.

ZAALISHVILI, M.M.; MIKADZE, G.V.

Some problems of mechanical chemistry of the smooth muscle.  
Biokhimiia 29 no.5:801-811 J1-Ag '64. (MIRA 18:11)

1. Institut fiziologii AN GruzSSR, Tbilisi.

MIKADZE, I.

Structure and properties of colloidal askanton. B. S. Kandelaki and I. Mikadze. *Colloid J.* (U. S. S. R.) 3, 365 481 (1937). Askanton is a bentonite found in Western Georgia (U. S. S. R.). The dry powder clay forms, on mixing with  $H_2O$ , a stable colloidal sol if the concn of the clay is below 0.5%. At greater concns, the system undergoes a thixotropic gelation. The colloid has a neg. charge, is coagulated by salts and the rate of coagulation is directly proportional to the valence of the salt. Addn. of MeOH, EtOH, HCl, AcOH,  $H_2SO_4$ , or HCl accelerates gelation of concd. colloids. Heating from 17° to 45° has a similar effect, the rate of gelation increasing with temp. An ultramicroscopic investigation of Brownian and thixotropic properties of askanton gels was made during various stages of gelation. S. I. M.

ASS. SLA METALLURGICAL LITERATURE CLASSIFICATION

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |                     |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---------------------|--|
| 137 AND 138 SERIES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  | 140 AND 141 SERIES  |  |
| PERMITS AND PROPERTIES INDEX                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |                     |  |
| CA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  | 19                  |  |
| <p>Effect of the degree of dispersity on the viscosity of Askan clay. B. S. Kandelaki and I. L. Mikadze (Tbilisi Chem. Inst.). <i>Bull. Acad. Sci. Georgian S.S.R.</i> 4, 973-5 (1943) (in Georgian and Russian).—Four chemically identical fractions of decreasing dispersity (particle sizes less than 1.75, 1.75–2.85, 2.85–3.32, 3.32–5.70 <math>\mu</math>) in 4% suspension in dist. H<sub>2</sub>O showed decreasing viscosities <math>\eta</math> by Höppler's method of a ball falling through a tube tilted at 10° from the vertical. Considerable increase of <math>\eta</math> was found in all fractions after 41 days aging. Dil. hydronols (0.45%) show no appreciable differences in <math>\eta</math> between fractions. The effect of dispersity begins to be noticeable only at concns. high enough to permit structure formation. N. Thon</p> |  |                     |  |
| ASM-560 METALLURGICAL LITERATURE CLASSIFICATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  | BETT J. P. J. 1970  |  |
| FROM SYNOPTIC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  | FROM SUMMARY        |  |
| INDEXED MAP DIV 800                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  | CLASSIFIED          |  |
| EXPOSED 0.2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  | EXPOSED ONE DIV 100 |  |

MIKADZE, I.

3

(Investigation of turf from Poti deposits in order to prepare alkali turf reagents. I. Tayberidze, M. Shishinashvili, and I. Mikadze. *Trudy Inst. Khim. im. P. G. Maslitskii, Akad. Nauk Gruzii. S.S.R.* 11: 71-8(1963)(Russian summary).—The best method of leaching humic substances from turf is the treatment of turf with concd. NaOH. Paste so obtained after diln. with H<sub>2</sub>O contains a sufficient amt. of humus substances for treatment of argillaceous soils. N. Charnadarian.

MIKADZE, I.I.; SHISHNIASHVILI, M.Ye.

Temperature influence on structural and mechanical properties of  
clay suspensions [in Georgian with summary in Russian]. Trudy  
Inst. khim. AN Gruz. SSR 13:77-83 '57. (MIRA 11:4)  
(Clay)

TA VBERIDZE, I.D.; MIKADZE, I.I.; KVASKHVADZE, K.S.

Effective use of sodium humate in drilling [in Georgian with summary  
in Russian]. Trudy Inst. khim. AN Gruz. SSR 13:137-144 '57.  
(Sodium) (Oil well drilling fluids) (Humates) (MIRA 11:4)

TAVBERIDZE, I.D.; MIKADZE, I.I.; KVASKHVADZE, K.S.

Utilization of petroleum emulsifying drilling muds in the  
Norio sector. Trudy Inst.khim. AN Gruz.SSR 14:83-87 '58.  
(MIRA 13:4)  
(Norio region(Georgia)--Oil well drilling fluids)



MIKADZE, I.I.

Effect of some reagents on the structural and mechanical  
properties of askangel suspensions. Trudy Inst.khim.AN Gruz.  
SSR 16:127-132 '62. (MIRA 16:4)  
(Askangel) (Suspensions (Chemistry))

TAVEERIDZE, I.D.; MIKADZE, I.I.; KVASKHVADZE, K.S.

Preparation and use of emulsions of petroleum products from  
self-emulsifying oil. Trudy Inst.khim.AN Gruz.SSR 16:159-166  
'62. (MIRA 16:4)

(Petroleum products) (Emulsions) !

S/137/60/000/011/002/043  
A006/A001

Translation from: Referativnyy zhurnal, Metallurgiya, 1960, No. 11, p. 16,  
# 25270

AUTHORS: Mikadze, I.S., Chachanidze, O.V., Indzhid, G.A., Lazarashvili, I.G.

TITLE: On the Use of a Mathematical Computer for Controlling the Electrical  
Conditions of Ferroalloy Arc Furnaces

PERIODICAL: Dokl. Nauchno-proizv. konferentsii mashinostroiteley i priborostroiteley, Leningrad, Sudpromgiz, 1959, pp. 123 - 128

TEXT: To improve the process in ferroalloy furnaces and to bring about its comprehensive automation, an analog computer is being developed to control the electrical conditions of ferroalloy arc furnaces by root-mean-square current values and mean values of useful power. The computer is intended for the joint operation with the existing regulator. During melting of the charge the maximum permissible power supply is controlled. During refining, only the programmed temperature of the molten metal has to be maintained. The following methods of con-

Card 1/2

S/137/60/000/011/002/043  
A006/A001

On the Use of a Mathematical Computer to Controlling the Electrical Conditions of Ferroalloy Arc Furnaces

trolling the electric conditions of the furnace are possible when using the computer: by the mean value of the square of current; the summary real power; the summary useful power; the useful power of each phase.

V.B.

Translator's note: This is the full translation of the original Russian abstract.

Card 2/2

S/193/60/000/002/002/013

A004/A001

AUTHORS: Mikadze, I. S.; Chachanidze, O. V.; Gay, A. M., Chikobava, A. I.

TITLE: Regulating computer for ferroalloy arc furnaces

PERIODICAL: Byulleten' tekhniko-ekonomicheskoy informatsii, no 2, 1960, 8-10

TEXT: The author describes the design and function of a regulating computer for ferroalloy arc furnaces, developed by the Tbiliskiy nauchno-issledovatel'skiy institut priborostroyeniya i sredstv avtomatizatsii (Tbilisi Scientific Research Institute of Instrument Making and Automation Equipment) (TNIISA). This computer is intended to control the accuracy of regulators which are to maintain the definite ratio of current to voltage in high-power electric arcs. The computer performs operations of algebraic addition, multiplication and integration. It is composed of building blocks designed for electronic analog computers. The utilization of the computer required the introduction of a measuring current transformer 1 and excitation choke 2 into the circuit of the existing regulator. The latter replaced the autotransformer. For the input of alternating values into the computer, which are proportional to the voltage of the arc - fusion zone measuring voltage transformer 3 is provided. This transformer receives the

Card 1/3

Regulating computer for ferroalloy arc furnaces

S/193/60/000/002/002/C13  
A004/A001

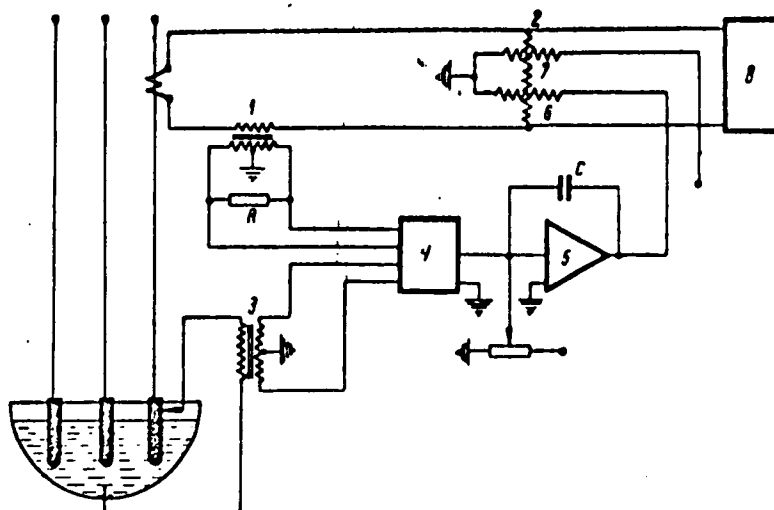
voltage acting between the tracer and the electric zero point of the furnace. A steel wire 2-4 mm in diameter is placed in the furnace lining to lead out the electric zero phase. The voltage, proportional to the current phase of the furnace being regulated and to the voltage of the arc - fusion zone, is fed into multiplying block 4. The voltage at the output of the multiplying block is proportional to the power or, at a corresponding switching over, to the square of the current of the furnace phase being regulated. This voltage is supplied to summing integrator 5. The unbalance voltage, forming as a result of summing up, is integrated and acts on control winding 6 of choke 2, thus effecting the integrated correction of the regulator current circuit. Excitation winding 7 of the same choke is intended for the current control in the regulator current circuit. The service tests showed that regulator 8 equipped with a computer increases by 1-2% the accuracy of maintaining the mean current value in the phases and the mean power value in the arc - fusion zone. The author points out that TNILSA has developed a computer for the continuous measurement of the real and reactance resistance in the short circuit. There is 1 figure

Card 2/

Regulating computer for ferroalloy arc furnace

S/193/60/000/002/002/013  
A004/A001

Figure:



Card 3/3

CA

10

Addition of hydrogen to acetylenic derivatives. Catalytic hydrogenation of 1,4-di-(*o*-cumyl)-2-butyne-1,4-diol. I. M. Gverdtsiteli and Sh. G. Mikadze (I. V. Stalin State Univ., Tbilisi). *Zhur. Obshchei Khim.* (J. Gen. Chem.) 21, 1476-9 (1951).—To the Grignard reagent from 8 g. Mg, 37 g. EtBr, and  $\text{C}_6\text{H}_6$  was added 30 g. *o*-iso- $\text{PrC}_6\text{H}_4\text{CHO}$  and the mixt. worked up after 72 hrs., yielding 36.8% (*o*-iso- $\text{PrC}_6\text{H}_4\text{CH(OH)C}_6\text{H}_4\text{H}$ , m. 117.5–19.0° (from petr. ether). Its hydrogenation over Pd-on-starch is much slower than that of  $[\text{PhCH(OH)C}_6\text{H}_4]_2$  or *sym*- $[\text{MePhC(OH)C}_6\text{H}_4]_2$ ; the rate, however, increases with increased amts. of the catalyst. After addn of 2 H there was isolated the *olefinic analog*, m. 123–5° (from petr. ether). Hydrogenation over Pt is rapid and no pronounced rate change is observed after the addn of 2 H, and the final product is the *said analog*, m. 103–5° G. M. Kosolapoff

*Lab. of Org. Chem*

1952



10

CR

The addition of hydrogen to an acetylenic derivative  
/Catalytic hydrogenation of 1,4-di(o-cumyl)-2-butyne-1,4-  
diol. I. M. Gverdtsiteli and Sh. G. Mikadze. J Gen  
Chem U.S.S.R. 21, 1640-11(1951)(Engl translation).—  
See C A 46, 2983e R W

OVERDTSITELI, I.M.; MIKADZE, SH. G.

Addition of hydrogen to acetylenic compounds. The rate of hydrogenation of 1,4-butyne-1,3-diol and its acetate. Zhur. Obshchey Khim. 22, 1401-5 '52. (MLRA 5:8)  
(CA 47 no.13:6338 '53)

1. Tiflisskiy gosudarstvennyy universitet.

MIKADZE, SH.G.

Chemical Abst.  
Vol. 48 No. 5  
Mar. 10, 1954  
Organic Chemistry

4  
Chim (2)  
Addition of hydrogen to acetylenic compounds. The rate  
of hydrogenation of 1,4-butyne-2-ol and its acetate. I. M.  
Gveritsitell and Sh. G. Mikadze. *J. Gen. Chem. U.S.S.R.*  
22, 1446-8 (1952) (Engl. translation): See C.A. 47, 6338f.  
H. L. H.

MI 1953, S. G. and Gverdtisiteli, I. M.

Addition of Hydrogen to Acetylene Derivatives. Catalytic Hydrogenation of Tetrapropyl Hexaciindole, page 952.

Sbornik statey po obshchey khimii (Collection of Papers on General Chemistry,, Vol II, Moscow-Leningrad, 1953, pages 180-186.

Tbilisi State U

MIKADZE, Sh. G.; Gverdtsiteli, I. M. and Tsiklauri, T. D.

Catalytic Hydrogenation of Acetylenic Glycols. Catalytic Hydrogenation of Tetra Propyl-Butenediol and Di (1-Hydroxy Cycloheptyl) Acetylene, page 956. Sbornik statey po obshchey khimii (Collection of Papers on General Chemistry), Vol II, Moscow-Leningrad, 1953, pages 1680-1686.

Tbilisi State U

MEMO 11/6

**CZECH** Catalytic hydrogenation of acetylenic glycols. The rate of hydrogenation of 2,2,3,6,7,7-hexamethyl-4-octyno-3,6-diol and 2,3,6,6-tetramethyl-1-heptyne-2,5-diol. I. M. Gverditski and Sh. G. Mikheev (U. S. State Univ., Tbilisi). *Sbornik State Obshchest. Khim.*, 2, 000-2(1953). Hydrogenation of  $[(C_2Me_2(OH)CMe)_2]$ , m. 78-80°, over Pd gave the dihydro deriv. (ethylene analog), m. 39.5-41.5°. Addn. of 22 g.  $Me_2C(OH)C_2CH_3$  to 80 g. powd. KOH in 200 ml.  $Bz_2O$  gave after 3 days at room temp. 48%  $Me_2CCMe(OH)C_2CC(OH)Me$ , m. 76-7° (from ligroline), hydrogenated over Pd to the ethylene analog, b<sub>p</sub> 128-0°, d<sub>4</sub><sup>20</sup> 0.9447, n<sub>D</sub><sup>20</sup> 1.4428. Hydrogenation over Pt black showed no breaks during the reaction and yielded the said analog, b<sub>p</sub> 130-1°, d<sub>4</sub><sup>20</sup> 0.9207. Introduction of a  $Me_2C$  group in place of a  $Me$  group in acetylenic glycols reduces the rate of hydrogenation. G. M. Kosolapoff

10/2/54

MIKADZE, SH. G.

Chemical Abstracts  
May 25, 1954  
Organic Chemistry

Mechanism of the Favorskii reaction. I. M. Gvornitskii and Sh. G. Mikadze (T. V. Stalin State Univ., Tbilisi, *Doklady Akad. Nauk S.S.S.R.* 89, 881-4 (1963); cf. Petrov and Mitrofanova, *C.A.* 43, 5809; 44, 6388g.—The Favorskii reaction of  $C_3H_7$  with carbonyl compds. in the presence of KOH proceeds as follows: the 1st step is the formation of  $KC_3H_7$ , which at low temp. adds across the CO group of the ketone and the product on hydrolysis yields the acetylenic alc. The acetylenic glycols occur through formation of  $C_3K$ , which adds to 2 moles of the ketone at elevated temp. To 10 g. powd. KOH were added dropwise 5 g.  $CH_3CC(OH)Me_2$  (temp. rise to  $60^\circ$  occurred) and after 6 min., 12 g.  $Me_2CO$  all at once (temp. rise to  $85^\circ$ ); the mixt. solidified and after 15 min. was treated with  $H_2O$  and extd. with  $Et_2O$ , yielding 18% tetramethylbutynediol, m.  $93-4^\circ$ . For the prepn. of  $\gamma$ -acetylenic glycols the following procedure was used: a slow stream of  $C_3H_7$  (2-3 fold excess) was passed into 3 moles powd. KOH at  $70-80^\circ$ , 1 mole ketone added, and the mixt. treated after 5-10 min. with  $H_2O$  and extd. with  $Et_2O$ .  $Me_2CO$  gave 38-40% tetramethylbutynediol, m.  $94-5^\circ$ ;  $CH_3CC(OH)Me_2$  gave 3-10% of the same glycol;  $MeEtCO$  gave 80-90% dimethyldiethylbutynediol, m.  $54-5^\circ$ ;  $iso-Pr_2CO$  gave 61% tetraisopropylbutynediol, m.  $106-7^\circ$ ; cyclohexanone gave 80-90% corresponding acetylenic diol, m.  $101-2^\circ$  (if only a theoretical amt. of  $C_3H_7$  is used, the yield is 70-80%).  
G. M. Kozlovskii





MIKADZE, Sh.; GVERDTSITELI, I.

Synthesis and catalytic hydration of methylethylbutyndiol and  
diazopropylfurylbutyndiol [in Georgian with summary in Russian].  
Trudy Tbil GU no.62:167-176 '57. (MIRA 11:7)

1. Tbilisskiy gosudarstvennyy universitet imeni Stalina, kafedra  
organicheskoy khimii.  
(Butyndiol) (Hydration)

36523

S/081/62/000/006/044/117  
B101/B110

11.1340

AUTHORS: Gverdtsiteli, I. M., Mikadze, Sh. G.

TITLE: Dehydration of glycols of the diacetylene series. Dehydration of 2,7-dimethyl-octadiin-3,5-diol-2,7

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 6, 1962, 176, abstract 6Zh34 (Tr. Tbilissk. un-ta, v. 74, 1959, 173 - 179)

TEXT: 2,7-dimethyl-octadien-1,7-diin-3,5 (I) is obtained by heating (2 hr, bath temperature 160 - 170°C) 10 g of 2,7-dimethyl-octadiin-3,5-diol-2,7 with 1 g of  $P_2O_5$  in 60 ml of benzene in a Dean Stark apparatus, yield 20 - 25 %, b. p. 57 - 58°C/3 mm Hg,  $n_D^{20}$  1.5700,  $d_4^{20}$  0.8463. After long standing (10 to 15 days), I forms a polymer which on contacting a glass rod ignites explosively. 2,7-dimethyl octane, b.p. 114 - 115°C/726 mm Hg,  $n_D^{18}$  1.4110,  $d_4^{20}$  0.7304, is obtained by complete hydration of 2.6 g I in 50 ml  $CH_3OH$  over platinum black. [Abstracter's note: Complete translation.]  
Card 1/1



MIKADZE, V. Sh.

MIKADZE, V. Sh., kapitan meditsinskoy sluzhby; BABAK, P. M., starshiy leytenant  
meditsinskoy sluzhby

Treating epidermophytosis with the unit under camp conditions. Voen.-  
med. zhur. no. 7:83 J1 '57. (MIRA 11:1)  
(DERMATOMYCOSIS)

MIKHELYAN, A.L.

21727

MIKHELYAN, A.L. Parametricheskiv rezonans v elektrodinamicheskoi  
sistemakh. Stizheni. Nauch.-Tekhn. Sbornik (Mosk. elektrotekh.  
In-T svyazi), 7, 1949, S. 3-16. — Bibliogr: 11 nazv.

MO: Letopis' izobreteniy i izvyuzheniya, M., 1949, 1947

MIKAEIYAN, A. L.

Electric Waves

Use of a stratified medium for focussing waves, Dokl. AN SSSR, 81, No. 4, 1951.  
Moskovskiy Elektrotekhnicheskii Institut Svyazi, rec. 14 July 1951.

SO: Monthly List of Russian Accessions, Library of Congress, May<sup>2</sup> 1951, Uncl.

MIKAYELIAN, A. L.

USSR/Physics - Light Trajectory

11 Mar 52

"General Method for Determining the Parameters  
Governing Nonhomogeneous Media According to Given  
Trajectories of Rays," A. L. Mikayelian, Moscow  
Electrotech Inst of Communications

"Dok Ak Nauk SSSR" Vol LXXXIII, No 2, pp 219,220

Acknowledges the assistance of A. A. Pistol'kors,  
Corr Mem, Acad Sci USSR. Considers a plane non-  
homogeneous medium whose properties are character-  
ized by the phase velocity  $v = v(x,y)$ , a ray in  
such medium being propagated along a trajectory  
determined from the eq  $\int_S ds/v = \min$ , where  $S$  is the  
trajectory. Submitted by Acad B. A. Vvedenskiy,  
10 Jan 52. 214788

(PA 56 no. 668:5377 '53)

MIKHELYAN, A. L.

U S S R .

335.31

1952. On a method of solving an inverse problem in geometrical optics. A. L. MIKHELYAN. Dokl. Akad. Nauk SSSR, No. 15, p. 911-6 (1952) in Russian.

If the wave fronts in a two-dimensional inhomogeneous medium of refractive index  $n = n(x, y)$  are defined by  $S_1(x, y) = \text{const.}$ , any medium having refractive index  $n(x, y) = n_1(x, y)S_1(x, y)$  has the same family of wave fronts. This result is proved by obtaining a general form of a particular solution of the eikonal equation.  $S_1(x, y)$  is an arbitrary function of  $S_1(x, y)$ , and hence all the inhomogeneous media having wavefronts defined by  $S_1(x, y) = \text{const.}$  are known. There follow applications of the principle, in particular to Maxwell's classical "fish eye" problem.

B. H. BOWEN  
BB



21 Oct 52

USSR/Physics - Optical Trajectories

PA 23471107

"Use of the Method of Coordinate Systems for the Construction of Inhomogeneous Media in Accordance With Given Trajectories of the Rays," A. L. Mikhel'yan

"Dok Ak Nauk SSSR" Vol 86, No 6, pp 1101-1103

Considers the planar case of the inverse problem of geometric optics, namely, the problem of determining the parameters of inhomogeneous media in which the rays would be propagated along trajectories assigned earlier in an arbitrary manner.

23471107

Introduces an orthogonal system of coordinates  $u_1, u_2$ , in which the inhomogeneous medium is characterized by phase velocity  $v = v(u_1, u_2)$ . Acknowledges valuable comments of A. A. Pistolskors, Corr Mem, Acad Sci USSR. Submitted by Acad B. A. Vvenenskiy 8 Aug 52.

M. L. P. A. E. L. A.

23471107

FD-910

MIKAYEL'YAN, A. L.

USSR/Physics - Geometric optics

Card 1/1

Pub 153-19/26

Author

: Mikaelyan, A. L.

Title

: Construction of optically inhomogeneous media according to pre-assigned ray trajectories.

Periodical

: Zhur. tekhn. fiz. 24, 1322-1328, Jul 1954

Abstract

: Analyzes an isotropic inhomogeneous medium with the property of varying the phase velocity ( $v = v(x,y)$ ). The linear source of electromagnetic oscillations emits cylindrical waves. The problem of finding such an inhomogeneous medium which satisfies in advance specified ray trajectories is solved. Indebted to A. A. Pistol'kors, Corr. Mem., Acad Sci USSR. Four references, by the same author.

Institution

: --

Submitted

: September 1, 1953

MIKAYELIAN, A. L.

USSR/Physics - Rectangular wave-guides

Card 1/1 : Pub. 22 - 15/44

Authors : Mikaelyan, A. L.

Title : Electro-magnetic waves in a rectangular wave-guide filled with magnetized ferrite

Periodical : Dok. AN SSSR 98/6, 941-944, October 21, 1954

Abstract : An analysis is presented of the propagation of electro-magnetic waves (eiwt) in a rectangular guide filled with magnetized ferrite, magnetization of which is accomplished in a direction perpendicular to that of the wave guide. Three references; 2 U.S.S.R., 1 U.S.A. (1946-1953).  
Diagrams.

Institution : .....

Presented by: Academician V. A. Kotel'nikov, June 9, 1954.

Review B-85903, 14 Jun 57

FD-2246

MIKAYELYAN, A. L.  
USSR/Engineering - Metallography

Card 1/1      Pub 41-14/17

Author      :    Mikaelyan, A. L., Moscow

Title      :    On the measurement of ferrite parameters

Periodical :    Izv. AN SSSR, Otd. Tekh. Nauk 2, 137-139, Feb 1955

Abstract   :    Reviews past investigations of ferrite parameters. Believes that many of  
the methods listed are inapplicable to magnetized, anisotropic ferrite;  
shows why. Formulae. Eleven references, all USSR.

Institution:

Submitted   :    January 15, 1955

MIKAYELIAN, A. L.

"How to Compute Dielectric and Magnetic Permeabilities of Substances with  
Inclusions of Particles that have a Different Permeability," Radio Tekh, No 1, 1955

MIKAYELIAN, A. L.

323  
 021.372.8:021.518.134  
 Magneto-optical Phenomena in a Rectangular  
 Waveguide Containing a Ferrite Plate. IEL  
 Mikayelian. (Bull. Acad. Sci. U.S.S.R., ser. tech. Sci.,  
 March 1955, No. 3, pp. 139-140. In Rn. Van.) Results  
 are presented graphically of calculations of the propaga-  
 tion characteristics of H-waves, of frequency of the  
 order of 10 kMc/s, in a waveguide partly filled with ferrite.  
 In the presence of a transverse magnetic field. The  
 effects of position and thickness of the ferrite plate,  
 the dielectric constant, magnetization, frequency and  
 waveguide dimensions are considered. Propagation in  
 waveguides containing a ferrite/dielectric composite  
 plate or a ferrite plate and isotropic layers is also con-  
 sidered. See also 525 of 1955.

cm  
 of 1955

FD-3222

MIKAELYAN, A L  
USSR/Engineering - Radio

Card 1/1            Pub. 41-3/22

Author            : Mikaelyan, A. L., Moscow

Title             : Use of electronic Plasma to Form a Valve System

Periodical        : Izv. AN SSSR, Otd. Tekh. Nauk 7, 23-33, Jul 55

Abstract          : Considers questions of the propagation of electromagnetic waves between parallel surfaces and in a coaxial line, in which the properly located layer of electronic plasma is under the influence of a permanent magnetic field. Shows that in such systems the propagation constants depend on the direction of motion of the waves, which affords, in principle, a solution to the problem of the formation of valve systems for TEM waves. Four illustrations; one graph; formulae. Three references, all USSR.

Institution       :

Submitted        : 2 April 1955

MIKAYELYAN, H. L.  
USSR/Electronics - Wave Propagation

FD-2222

Card 1/1      Pub 90-2/12

Author : \*Mikaelyan, A. L., and \*Pistol'kors, A. A.

Title : ~~Electromagnetic waves in magnetized ferrites (ferromagnetic nonmetals)~~  
Electromagnetic waves in magnetized ferrites (ferromagnetic nonmetals)  
with conducting boundaries

Periodical : Radiotekhnika, 10, 14-24, Mar 1955

Abstract : The problem of electromagnetic waves propagation in ferrites, under a steady magnetic field and having one or two ideally-conducting surfaces, is discussed in details in this article. A well known method of partial waves is applied to study the above problem, which clearly brings out the physical aspect of the phenomenon. Maxwell's equation is applied to obtain the mathematical representation of wave propagation in the ferrites mass, and their reflections from the ideally-reflecting surfaces. It is pointed out that the reflected electromagnetic wave splits into two waves, having different amplitudes and coefficients of propagation. An analysis of the electromagnetic wave propagation at various angles with respect to the direction of the magnetic field is presented in this article. Two USSR references cited.

Institution: \*Active members of the All-Union Scientific and Technical Society of Radio Engineering and Electric Communications imeni A. S. Popov, Moscow

Submitted : 1 Sep 1954



MIKAYELIAN, A. L.

U S S R .

621.301.5 : 621.318.013 : 621.315.61  
2176. Methods of calculating the permittivity and permeability of artificial media. A. L. MIKAYELIAN. *Radioelektronika*, 10, No. 1, 21-26 (1955) In Russian.

The medium considered consists of a material having a permittivity  $\epsilon$ , and a permeability  $\mu$ , and of regularly spaced particles having parameters  $\epsilon_p$  and  $\mu_p$ . Expressions for the resultant parameters  $\epsilon_r$  and  $\mu_r$  of the medium are derived, under the assumption that dimensions of the particles are smaller than the wavelength, showing that these are functions of dielectric and magnetic dipole moments of the particles, respectively. The moments are evaluated on the basis of two alternative methods for the following types of non-conducting and perfectly conducting particles: elliptical, circular and hollow cylinders, flat strip, ellipse, sphere and disk. The results are tabulated. Magnetic dipole moments for the perfectly conducting particles are negative, their absolute value being smaller than that of a corresponding electrical moment. The possibility of producing an artificial medium with a refractive index  $< 1$  is discussed. R. E. SHORWICK

MIKAYELIAN, A.L.

2

621.372.8 : 538.566  
 2295. MAGNETO-OPTICAL PHENOMENA IN A RECTANGULAR WAVEGUIDE FILLED WITH ELECTRON GAS.

A.L. Mikayelian

Radiotekhnika, Vol. 10, No. 9, 3-13 (1959). In Russian.

An electron gas under the action of a steady magnetic field has a tensor permittivity. The propagation constant for transmission of e.m. waves through such a magnetized gas between parallel plates is interpreted as representing an ordinary and an extraordinary wave. When the analysis is extended to include the effect of the side walls of a waveguide it is shown that these waves correspond to H- and E-modes respectively. The partially filled guide is then treated. The behaviour depends on the direction of propagation and the possibility of making a "valve" in the waveguide is mentioned.

S.C. Dunn (M)

50

MIKAELYAN, A.L.

Valve systems for band and coaxial conductors. Dokl. AN SSSR 104  
no.1:72-75 S '55. (MLBA 9:2)

1. Institut radiotekhniki i elektroniki Akademii nauk SSSR. Pred-  
stavleno akademikom V.A.Ketel'nikovym.  
(Wave guides)